

The DoD Chemical and Biological Defense Program

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NBC Defense Collective Protection Conference

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Orlando, Florida

Outline

DATSD(CBD)

- ◆ **Overview of the Chemical and Biological Defense Program**
- ◆ **Evolution of the strategic context since 9-11-01**
 - Homeland Security
 - Quadrennial Defense Review
 - Defense Planning Guidance
- ◆ **Challenges for Collective Protection**
- ◆ **The Way Ahead**

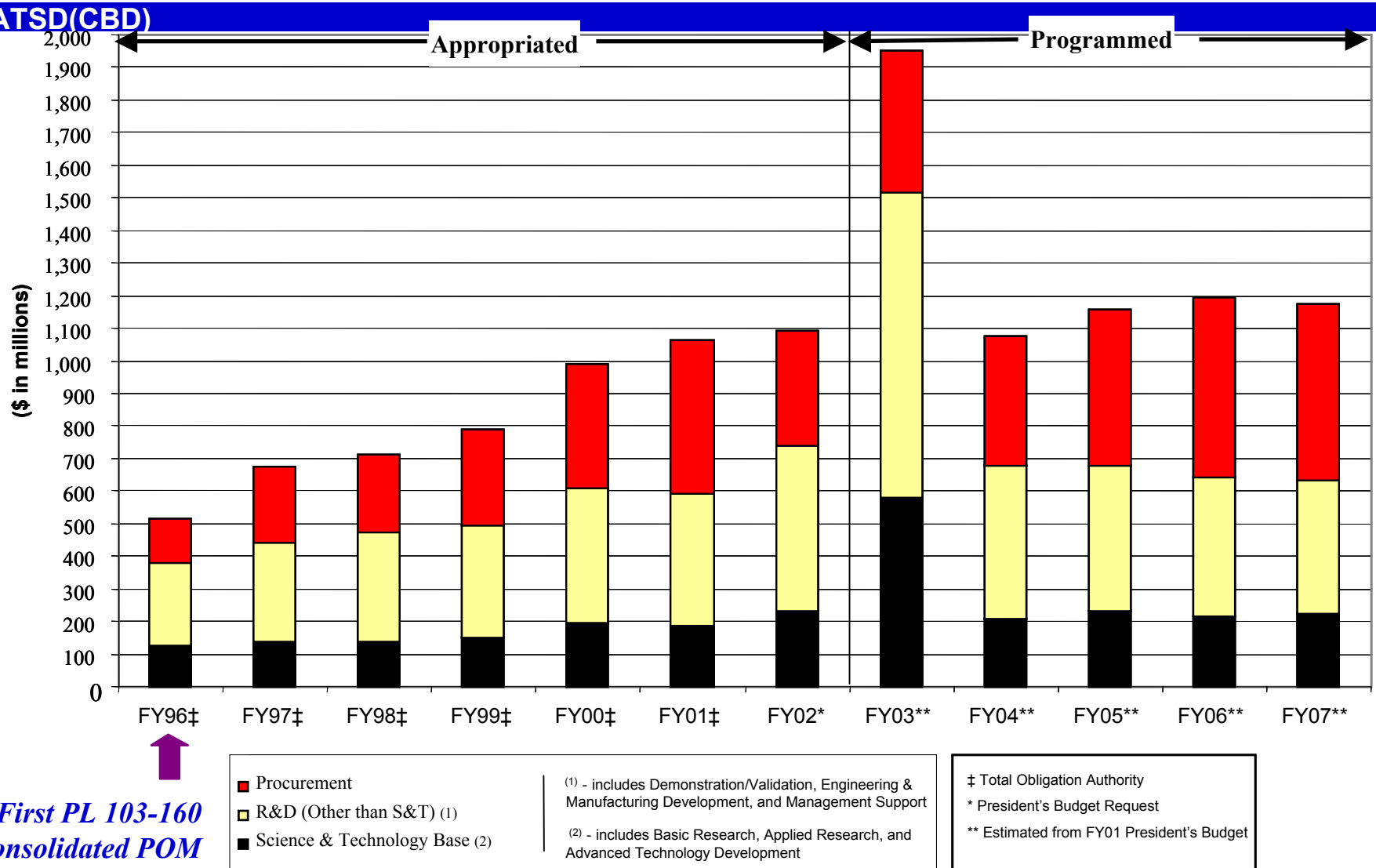
Creation of the Chemical and Biological Defense Program (CBDP)

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- ◆ **Established by Congress**
 - Fiscal Year 1994 National Defense Authorization Act
Public Law 103-160, Sect. 1703 (50 USC 1522)
- ◆ **“The Secretary of Defense shall ... Assign responsibility for overall coordination and integration of the chemical and biological warfare defense program and the chemical and biological medical defense program to a single office within the Office of the Secretary of Defense.”**
 - Provides visibility for many, relatively low-cost items
 - Eliminates unnecessary redundancy
- ◆ **Annual Report provided to Congress**
 - <http://www.acq.osd.mil/cp/reports.html>

DoD CB Defense Program

Historical Perspective- Funding



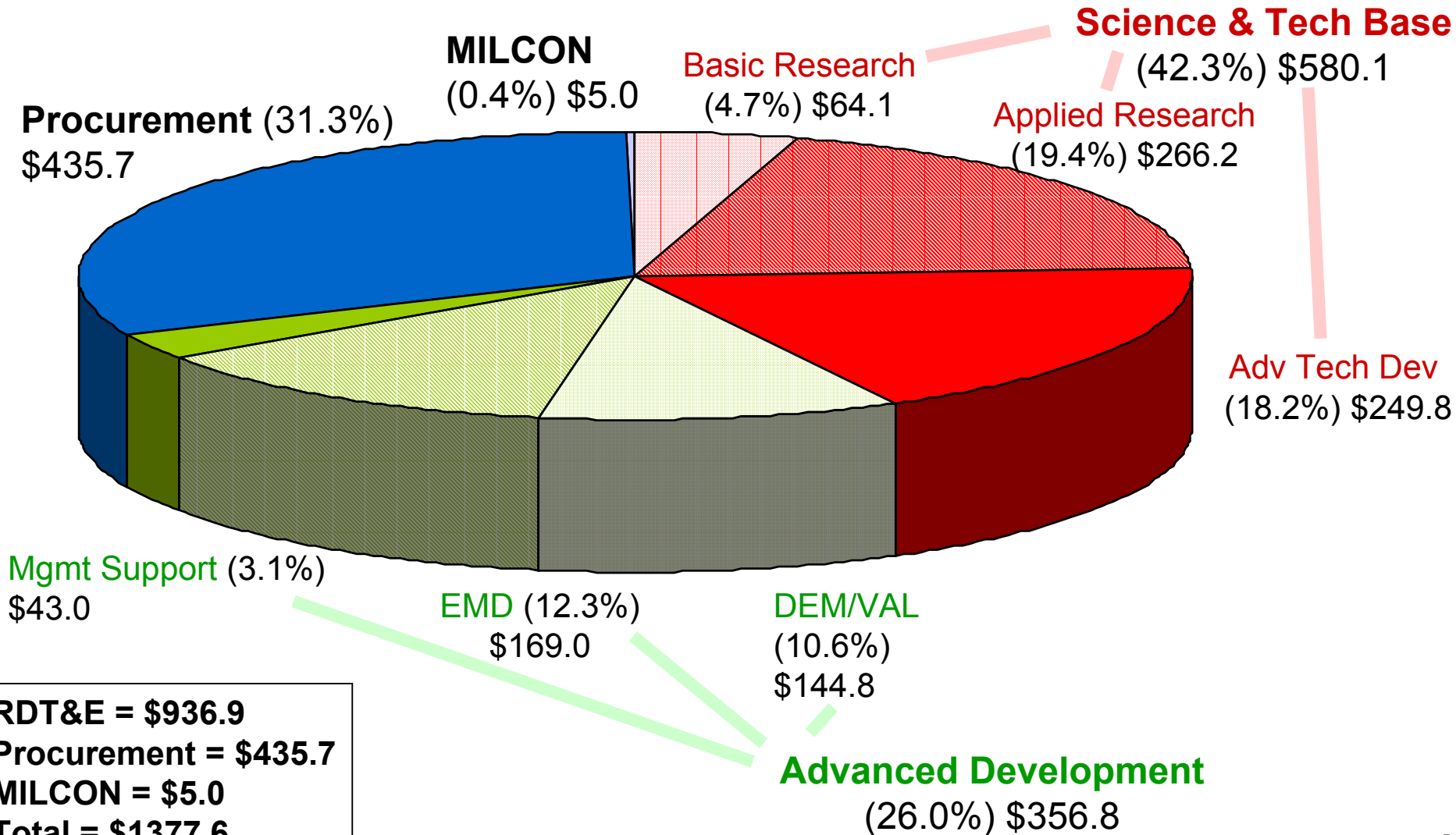
*First PL 103-160
Consolidated POM
submitted*

Note: \$.7M MILCON -FY02

\$ 5.0M MILCON- FY03

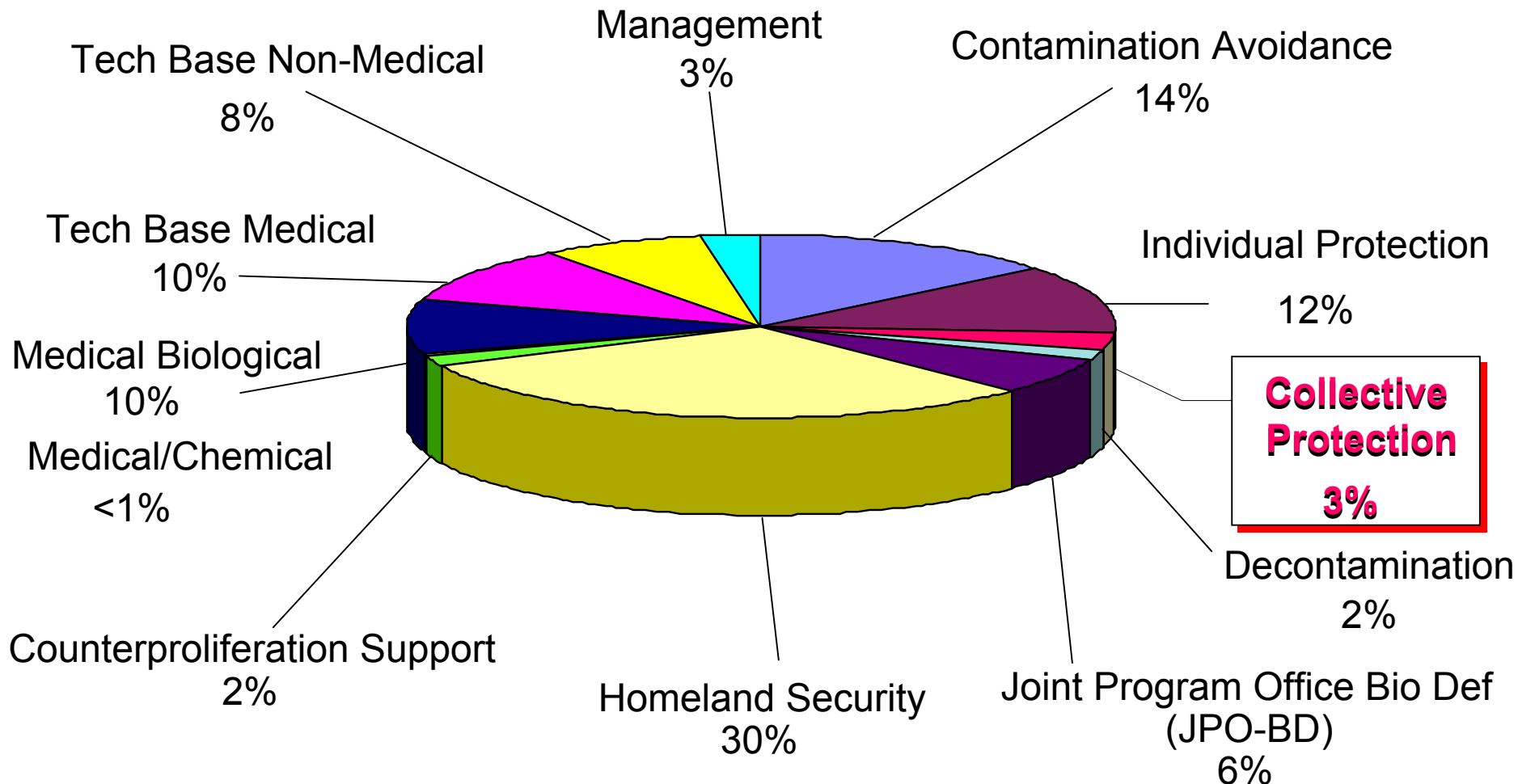
DoD Chemical/Biological Defense Program FY2003 (\$M)- President's Budget (PB) Request

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DoD Chemical/Biological Defense Program FY2003 (\$M)- President's Budget (PB) Request

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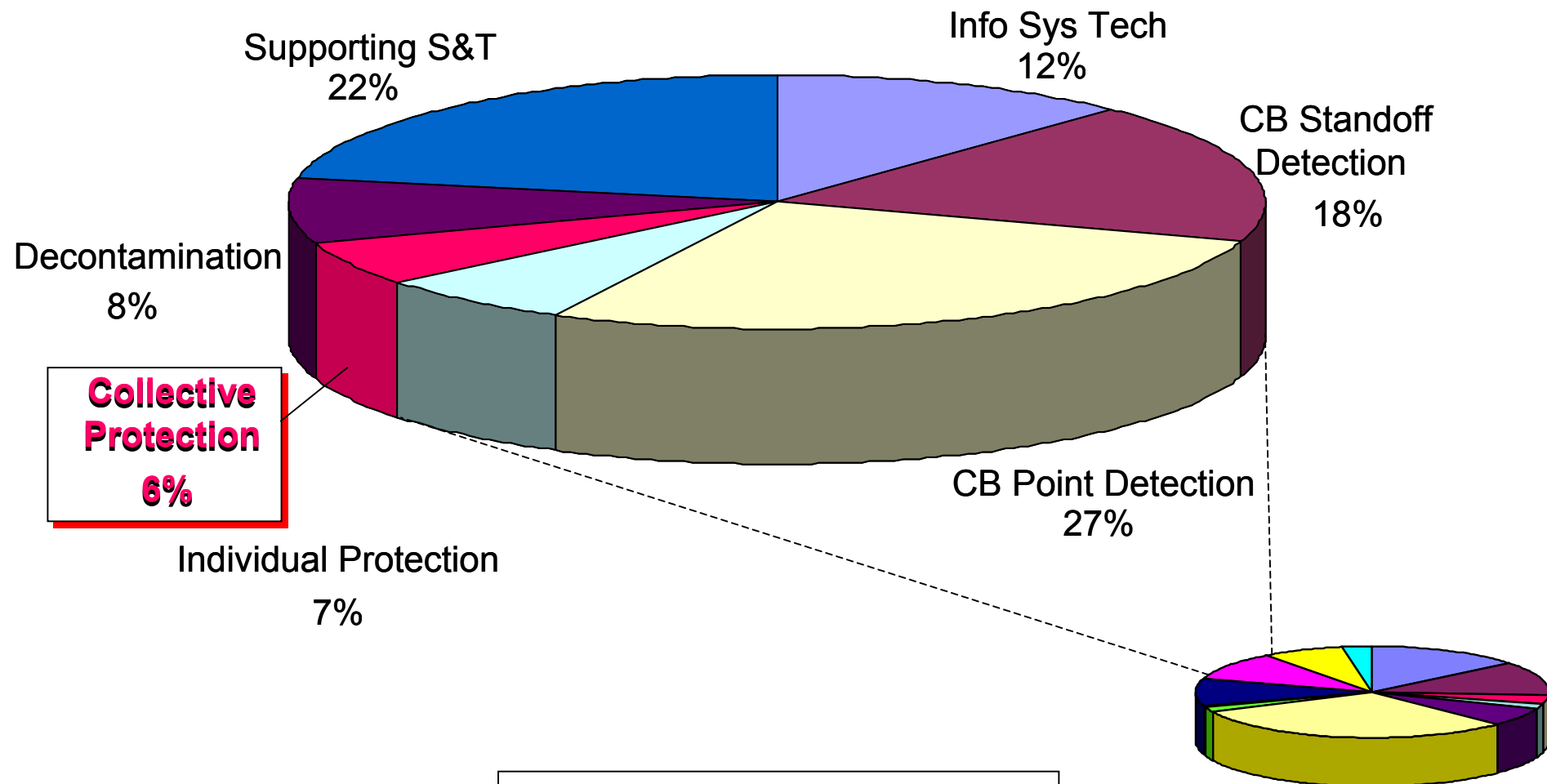


FY03 Total = \$1,377.6M

DoD Chemical/Biological Defense Program FY2003 (\$M)- President's Budget (PB) Request

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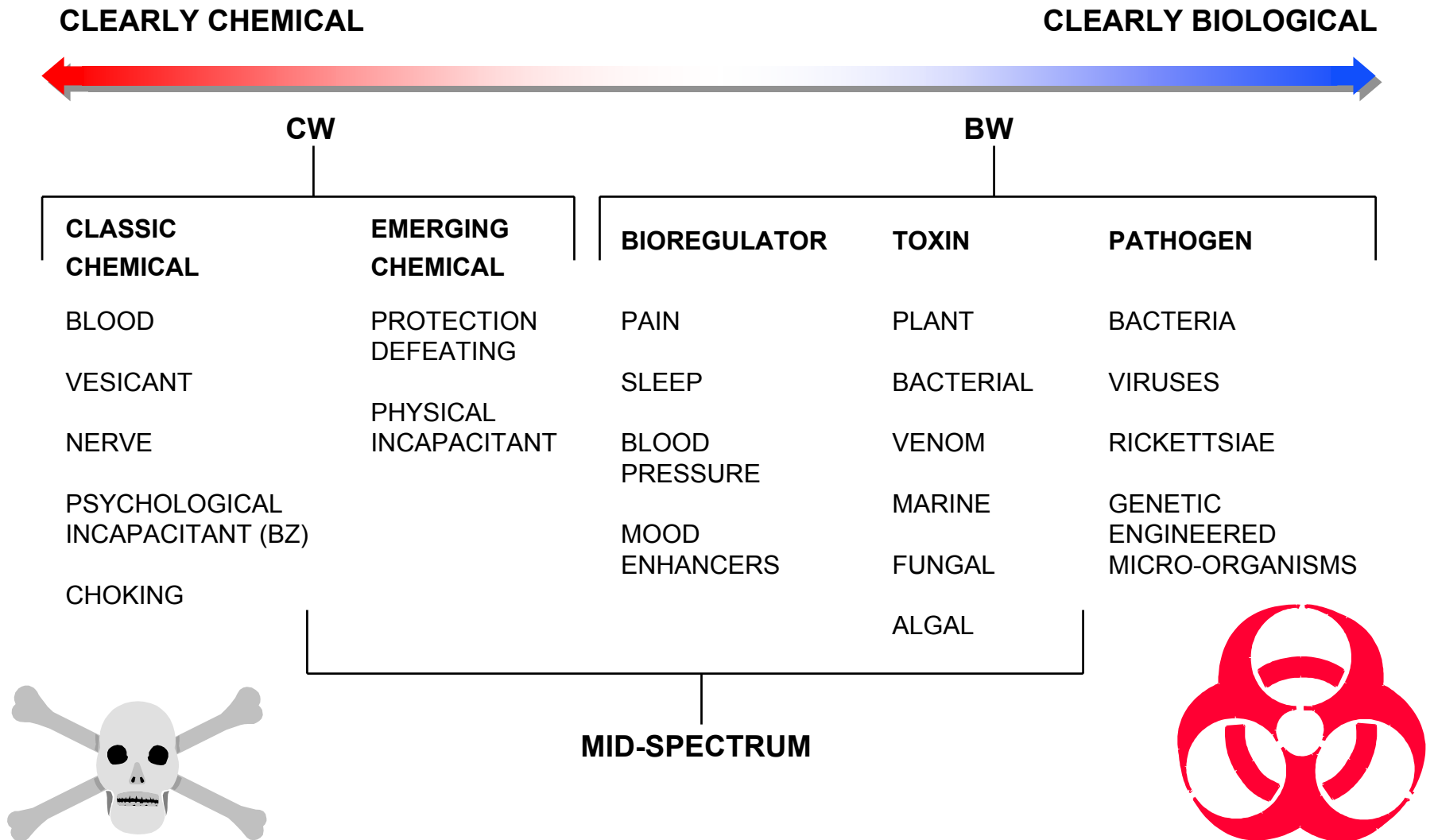
Non-Medical CBD Science and Technology Base (S&T)



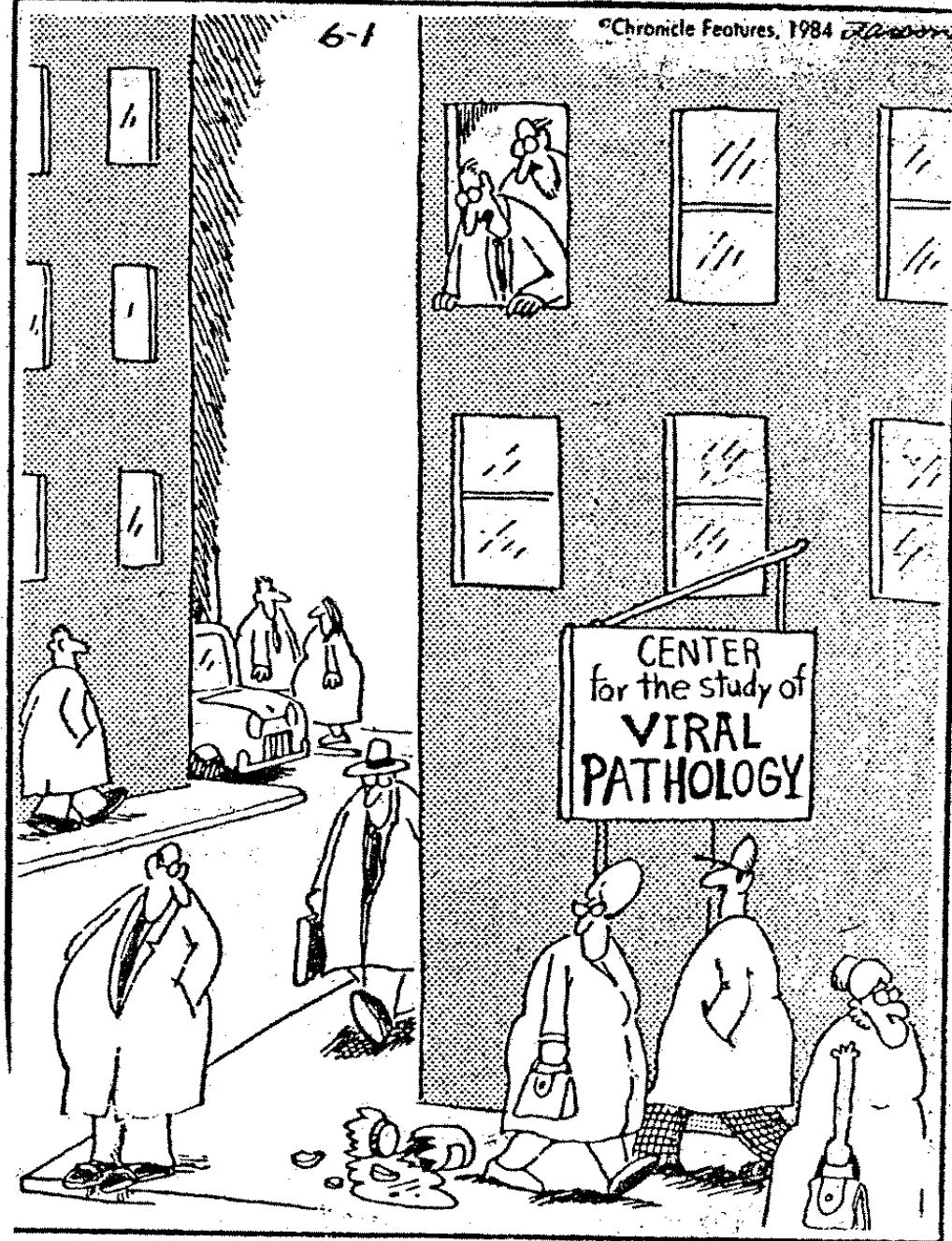
FY03 Total = \$105.1M

CB Agent Threat Spectrum

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©Chronicle Features, 1984 *Edison*



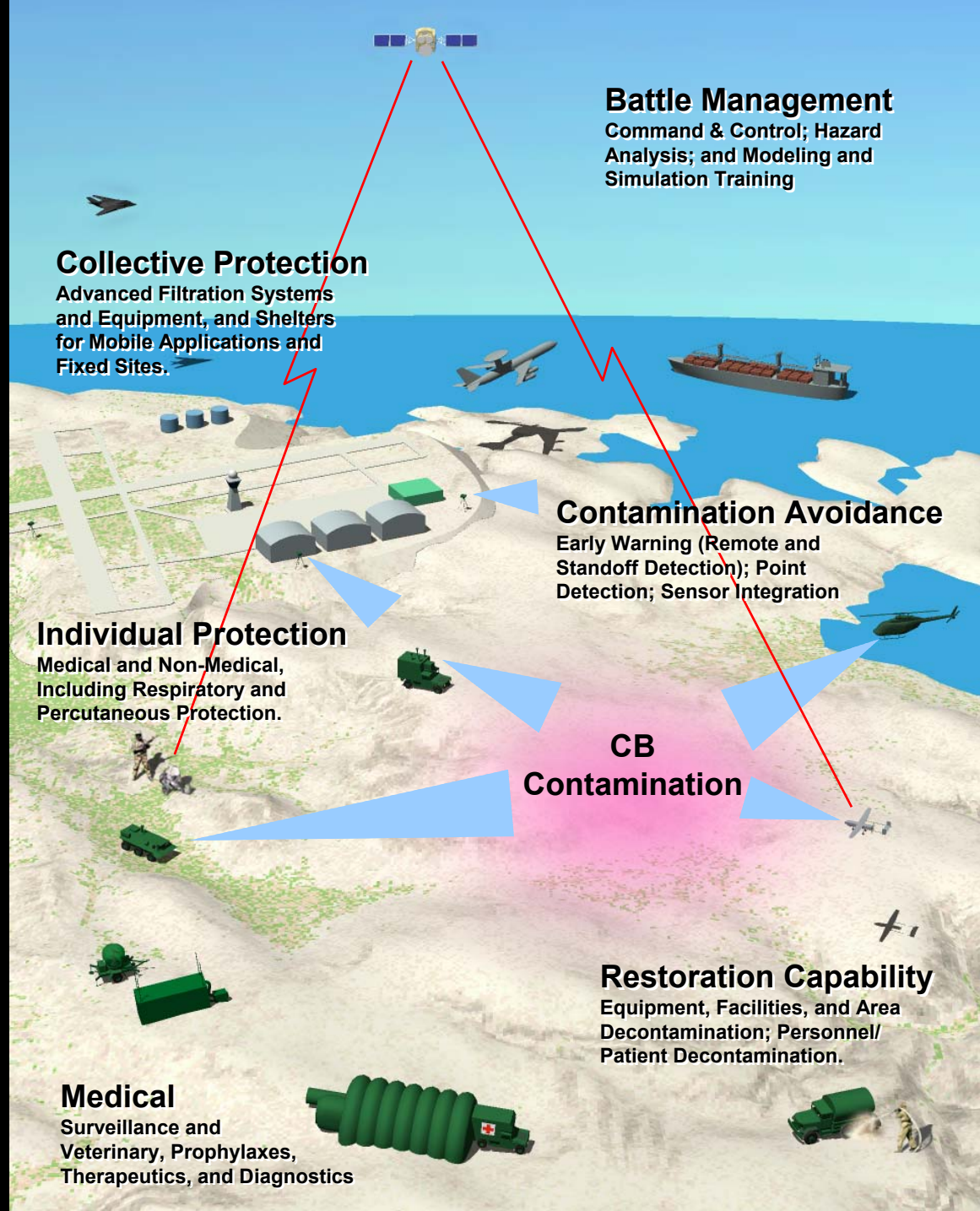
"Uh-oh."

DoD CB Defense Concept –

RDA to support the Warfighter

An Integrated System-of-Systems, including capabilities for:

- *Battle Management*
- *Contamination Avoidance*
- *Individual Protection*
- *Collective Protection*
- *Medical Systems*
- *Restoration*



Popular Interest In Bioterrorism

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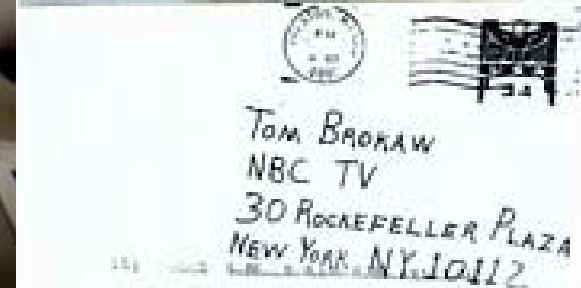
From fiction...



Popular Interest In Bioterrorism

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...to reality.





Al-Qaida videos show poison gas tests: CNN shows first samples from a cache of tapes

Bioterrorism Related Inhalation Anthrax: The First 10 Cases Reported in the United States

Pentagon: Hamas experimenting with chemical weapons

Is America at War

Israelis Brace For Fallout Of Attack By U.S. On Iraq

Kurdish Militants Conducted Tests With Deadly Toxin Ricin

Iraq Denies Laboratory Biological Weapons Link

Disjointed First Step - Transformation

The "Dirty Bomb" Scenario

Cruise Missile Threat Grows, Rumsfeld Says

Rumsfeld says Iraq has chemical, biological weapons, links to terrorism

Health Workers Await Official Smallpox Policy

New Questions Raised on Anthrax Perils: Study Finds Spores in Daschle Office Easily Stirred Up, Complicating Risk Analysis

New U.S. Department to Protect Against Catastrophic Terrorism

The Aftermath of 9-11

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Awareness of Threat Soars



- Entire spectrum of CB matters has received increased emphasis from the Administration, Congress, Media, and the Public
- Warfighting spectrum expanded to include homeland security
- Emphasizes importance of coordinated USG program to counter WMD proliferation
- Asymmetric methods are no longer a threat, but a reality



Our guides for the immediate future:
Flexibility and Ingenuity with Responsibility

Defense Transformation

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But we do not seek evolutionary progress in our ability to defend ourselves. So little is certain when it comes to the future of warfare, but on one point we must be clear: We risk deceiving ourselves and emboldening future adversaries by assuming it will look like the past. Sept. 11 proved one thing above all others: **Our enemies are transforming. Will we?**

Donald Rumsfeld, Secretary of Defense
May 16, 2002, *The Washington Post*

Quadrennial Defense Review

Transformation Tenets

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A Capability-Based Approach

- ◆ Shift basis of defense planning from a “threat-based” model to a “capabilities-based” model for the future:
- ◆ Capabilities based model:
 - Focuses more on **how an adversary might fight** rather than specifically whom the adversary might be or where a war might occur
 - Identify **capabilities** required to **deter and defeat** adversaries who will rely on surprise, deception, and **asymmetric warfare** to achieve objectives
 - Maintain our **military advantages** in key areas while we develop new areas of military advantage and deny **asymmetric advantages** to adversaries

Quadrennial Defense Review Transformation Tenets

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Paradigm Shift In Force Planning

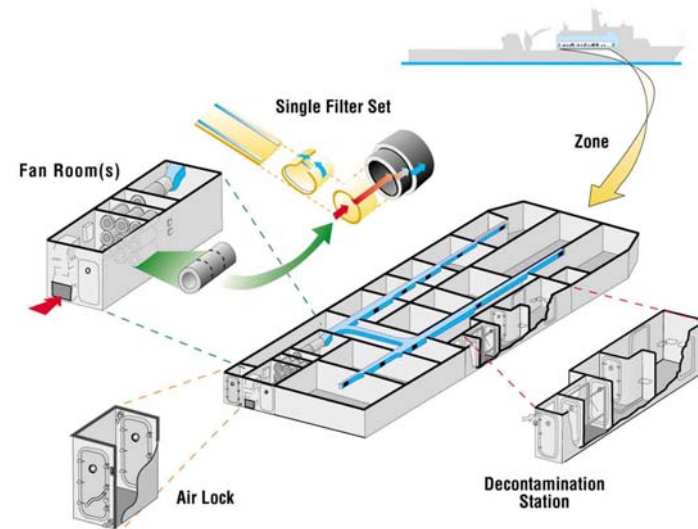
- ◆ **New force-sizing construct specifically shapes forces to:**
 - Defend the United States
 - Deter aggression and coercion forward in critical regions;
 - Swiftly defeat aggression in overlapping major conflicts while preserving for the President the option to call for a decisive victory in one of those conflicts- including the possibility of regime change or occupation; and
 - Conduct a limited number of smaller-scale contingency operations
- **Builds portfolio of capabilities that is robust across the spectrum of possible force requirements**
 - **Places new emphasis on unique operational demands associated with Defense of the U.S.**
 - **Restores the defense of the U.S as the DoD's primary mission**

Collective Protection

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- ◆ **System needed when:**
 - Sustained operations are required for critical nodes
 - Internal equipment needs protection from contamination
 - Long duration operations are expected in contaminated area
 - Operations require a clean environment, e.g., medical support



Collective Protection: Roadmap to the Future

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1991 (Desert Storm)

Limitations:

- Few shelters
- Very limited integrated protection in ships and vehicles
- Limited deployable collectively protected shelters for tactical applications

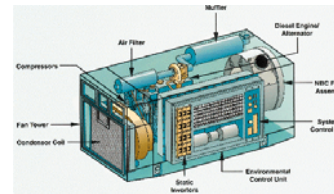
Current (FY02)

Improved capabilities fielded:

- Shipboard Collective Protection Equipment
- Selected Area Collective Protection System
- Ship backfit
- M51 Shelter System
- CB Protective Shelters (CBPS)
- Collectively Protected Deployable Medical Shelter (DEPMEDS)
- Improved high volume filters
- Transportable Collective Protection System



SACPS



Future (FY03-07)

Fielded in FYDP:

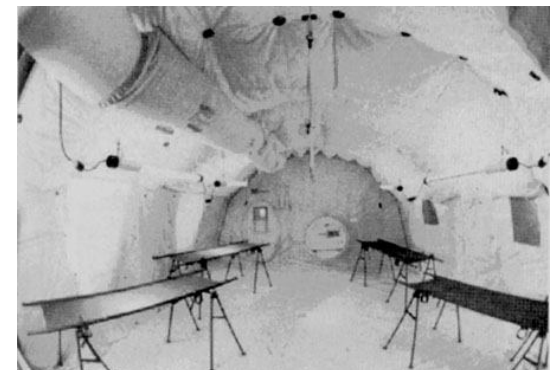
- Joint Transportable Collective Protection Shelter (JTCOPS)
- CB Protective Shelter (CBPS)/P3I
- Advanced Integrated Collective Protection System



Collective Protection: Key Capabilities To Be Procured FY03-07

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- ◆ **Joint Transportable Collective Protection System (JTCOPS)**
 - Effective mobile collective protection; new shelter system for long-term CP; use as a stand alone or within existing shelters
- ◆ **Collective Protection System Amphibious Backfit**
 - CPS is integrated with the ship's heating, ventilation, and air-conditioning (HVAC) systems and provides filtered supply air for over-pressurization of specified shipboard zones to keep toxic contamination from entering protected spaces. CPS eliminates the need for the ship's crew to wear protective gear (i.e., suits, masks)
- ◆ **Chemical/Biological Protective Shelter (CBPS)**
 - Highly mobile, rapidly deployable shelter system designed to be used for Echelon I and II forward area medical treatment facilities



INTERDISCIPLINARY STUDIES

	ROOM
CHEMISTRY FOR GEOLOGISTS	127
MATH FOR ARCHEOLOGISTS	214
PHYSICS FOR PSYCHOLOGISTS	206
BIOLOGY FOR MATHEMATICIANS	319
GEOLOGY FOR ENTOMOLOGISTS	114
BOTANY FOR ASTRONOMERS	
ANATOMY FOR PHYSICISTS	
PSYCHOLOGY FOR LABORATORIANS	
ANTHROPOLOGY FOR CHEMISTS	
TOPOLOGY FOR PALEONTOLOGISTS	
NUCLEAR PHYSICS	

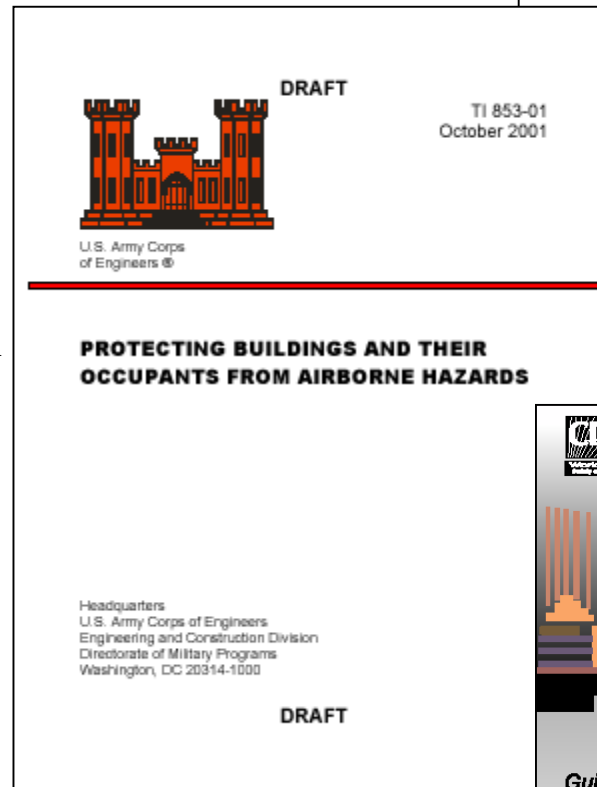
J. H. Harris



Collective Protection: Multiple Integrated Approaches

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- **Positive Pressure Collective Protection**
- **Air Filtration**
- **Pressurization and Levels of Protection**
- **Filter Unit Sizing for Pressurization**
- **Detection-based Approaches**
- **Internal Filtration—Recirculation Filters Units**
- **Operational Measures for Protecting Building Occupants**
- **Physical Security Measures**
- **Airlocks and Entry and Exit Procedures—Military Applications**

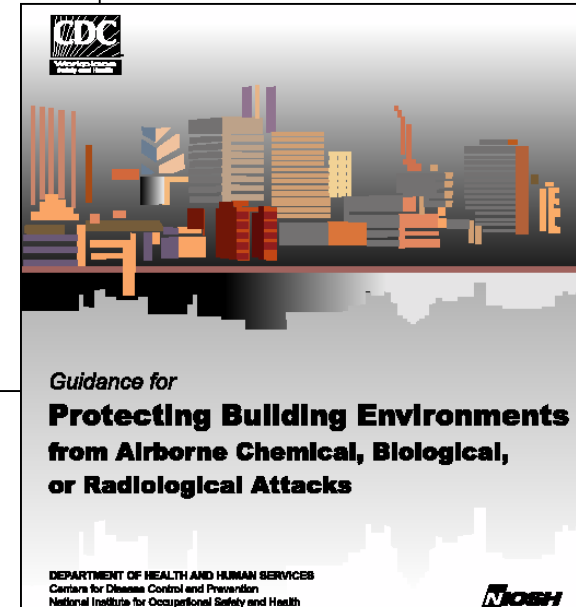


Protecting Buildings From a Biological or Chemical Attack:
actions to take before or during a release.

LBLN/PUB-49932

Philip N. Price, Michael D. Solin, Ashok J. Gadgil, William W. Delp,
David M. Lorenzetti, Elizabeth U. Findlayson, Tracy L. Thutcher,
Richard G. Sestro, Elizabeth A. Darby, Sonika A. Jarrin

July 10, 2002



Joint Service Installation Pilot Project (JSIPP)

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◆ Objectives:

- Increase CBRNE defense capabilities at 9 CONUS DOD installations
- Enhance emergency responder CBRNE capability for Consequence Management with equipment, procedures & training for on and off installation emergency response elements
- Generate installation CBRNE defense requirements recommendations.

◆ Scope

- Consists of two procurement efforts
 - Installation CB defense technologies designed to provide situational awareness & aid in consequence management decision making
 - Equip on post and train emergency responder elements in CBRNE consequence management, integrating civilian community responders
- Includes developing & conducting training for C2 & emergency responders
- Includes exercises to ensure capability and collect data to support CBRNE defense requirements recommendations

Collective Protection: Looking to the Future

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- ◆ *Military operational applications*
 - Mobile Applications
 - Shelters and Vehicles
 - Transportable Shelters
 - Fixed Site Applications
 - Retrofit of unprotected facilities
 - Integrated protection at high value fixed sites

Collective Protection: Looking to the Future

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◆ *Support to operations other than war*

– Protection of CONUS sites

- Military, Federal government, or other sites

– Non-traditional Concepts

- Protection from interior releases of contamination
- Collective protection integrated into facility designs (not limited to specialty military facilities)
- Shelter in place concepts
- Collective protection integrated with other countermeasures (e.g., monitoring and identification, warning systems, neutralization/decontamination)
- Continue leveraging science and technology investment
- Leverage efforts in other R&D areas (e.g., engineering, materials, HVAC)



The Way Ahead

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- Threat remains diverse, dispersed, and unpredictable
- Balance warfighter requirements vs. emerging homeland security requirements
- Ensure interoperability with first responders
- Continue to leverage commercial technologies to ensure rapid fielding of state-of-the-art capabilities

“We're in a new kind of war today.... And to prevail in this war, we will fight on the frontiers of knowledge and discovery.

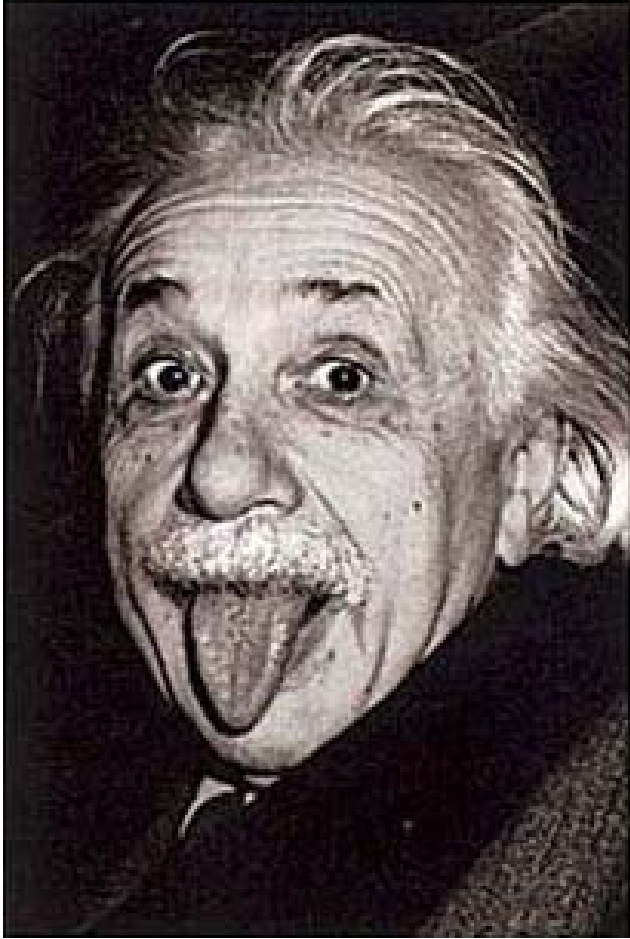
“Our scientific community is serving on the front lines of this war.”

– President Bush, Argonne National Laboratory, July 22, 2002



Questions/Discussion

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**“Today’s problems
cannot be solved with
the same thinking that
created them.”**

Albert Einstein

Back-Up Slides

QDR 2001 – Transformation Goals

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1. Protect bases of operation at home and abroad and defeat the threat of CBRNE weapons.

The Department must be prepared to provide support to state and local authorities, if requested by the lead federal agency. DoD is enhancing its anti-terrorism and force protection programs. It is also increasing investment in chemical and biological countermeasures, including personal protection for DoD personnel. Moreover, DoD has established Weapons of Mass Destruction Civil Support Teams, composed of National Guard personnel and the Marine Corps' Chemical- Biological Incident Response Force. These teams stand ready to provide support, if directed. To improve DoD's ability to provide such support, the QDR calls for selected readiness enhancements to the Army's Reserve Component.

QDR 2001 – Transformation Goals *(Cont'd)*

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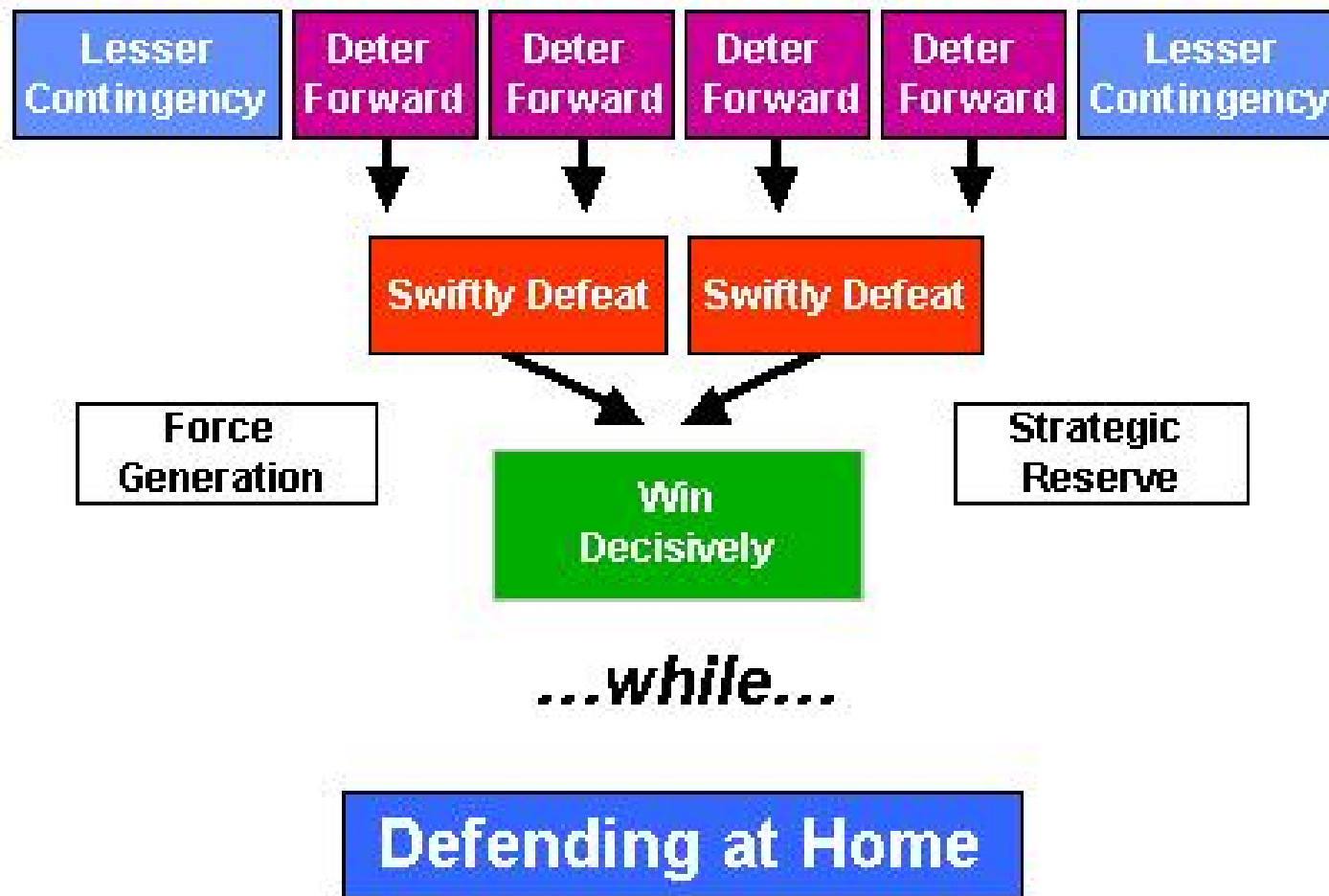
3. Project and sustain U.S. forces in distant anti-access and area-denial environments.

The defense strategy rests on the assumption that U.S. forces have the ability to project power worldwide. The United States must retain the capability to send well-armed and logistically supported forces to critical points around the globe, even in the face of enemy opposition, or to locations where the support infrastructure is lacking or has collapsed. For U.S. forces to gain the advantage in such situations, they must have the ability to arrive quickly at non-traditional points of debarkation to mass fire against an alerted enemy and to mask their own movements to deceive the enemy and bypass its defenses. Consequently, DoD must carefully monitor attempts by adversaries to develop capabilities that could detect and attack U.S. forces as they approach conflict areas or hold at risk critical ports and airbases with missiles and CBRNE attacks.

Defense Planning Guidance

4-2-1 Planning Construct

DATSD(CBD)



Detailed explanation available in *2002 Annual Defense Report* "Chapter 5" (pp. 49-64)

http://www.defenselink.mil/execsec/adr2002/pdf_files/chap5.pdf